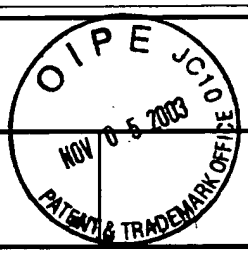
TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 02007(16792)

In Re Application: **Xiaodong Wang**



Serial No.	Filing Date	Examiner	Group Art Unit
10/631.991	July 31, 2003	Unassigned	Unassigned

NEAR-OPTIMAL MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) CHANNEL DETECTION VIA SEQUENTIAL MONTE CARLO

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Ralph F. Hoppin
Signature

Ralph F. Hoppin
Typed or Printed Name

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Ralph F. Hoppin
Signature

Dated: **November 3, 2003**

Ralph F. Hoppin
Registration No.: 38,494

Customer No.: 23389

cc: **RFH:rjl**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Xiaodong Wang	**Examiner:**	Unassigned
Serial No.:	10/631,991	**Group Art Unit:**	Unassigned
Filed:	July 31, 2003	**Docket:**	02007 (16792)
For:	NEAR-OPTIMAL MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) CHANNEL DETECTION VIA SEQUENTIAL MONTE CARLO	**Dated:**	November 3, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. G.J. Foschini and M.J. Gans, On Limits of Wireless Communications in a Fading Environment when Using Multiple Antennas, *Wireless Personal Commun.*, 6(3):311–335, 1998;

2. I.E. Telatar, Capacity of Multi-antenna Gaussian Channels, *Eur. Trans. Telecommun.*, 10(6):585–595, Nov. 1999;

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents Alexandria, VA 22313-1450 on November 3, 2003.

Dated: November 3, 2003

Ralph F. Hoppin

Ralph F. Hoppin

3. C.N. Chuah, D.N.C. Tse, J.M. Kahn, and R.A. Valenzuela, Capacity Scaling in MIMO Wireless Systems Under Correlated Fading, *IEEE Trans. Inform. Theory*, 48(3):637–650, Mar. 2002;

4. P.W. Wolniansky, G.J. Foschini, G.D. Golden, and R.A. Valenzuela, V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel, In *Proc.1998 Int. Symp. Sig. Sys. Elect. (ISSSE'98)*, Pisa, Italy, Sep. 1998;

5. G.J. Foschini, Layered Space-Time Architecture for Wireless Communication in a Fading Environment When Using Multi-Element Antennas, *Bell Labs, Tech. J.*, 1(2):41–59, 1996;

6. G.D. Golden, G.J. Foschini, R.A. Valenzuela, and P.W. Wolniansky, Detection algorithm and initial laboratory results using V-BLAST space-time communication architecture, *Elect. Let.*, 35:14–16, Jan. 1999;

7. O. Damen, A. Chkeif, and J. Belfiore, Lattice Code Decoder for Space-Time Codes, *IEEE Commun. Let.*, 4(5):161–163, May 2000;

8. B.M. Hochwald and S.T. Brink, Achieving Near-Capacity on a Multiple-Antenna Channel, *Submitted to IEEE Trans. Commun.*, Apr. 2002;

9. A.M. Chan and I. Lee, A New Reduced-Complexity Sphere Decoder For Multiple Antenna Systems, In *Proc. 2002 Int. Commun. Conf. (ICC'02)*, New York, N.Y., Apr. 2002;

10. A. Doucet, N. deFreitas, and N.J. Gordon (eds.), *Sequential Monte Carlo Methods in Practice*, New York: Springer-Verlag, 620pp., 2001;

11. X. Wang, R. Chen, and J.S. Liu, Monte Carlo Bayesian Signal Processing for Wireless Communications, *J. VLSI Sig. Proc.*, 30(1-3):89–105, Jan.-Feb.-Mar. 2002;

12. R. Chen, X.Wang, and J.S. Liu, Adaptive Joint Detection and Decoding in Flat-Fading Channels via Mixture Kalman Filtering, *IEEE Trans. Info. Theory*, 46(6):2079–2094, Sep. 2000;

13. J.S. Liu and R. Chen, Sequential Monte Carlo Methods for Dynamic Systems, *J. Amer. Stat. Assoc.*, 93:1302–1044, 1998;

14. R. Chen and J.S. Liu, Mixture Kalman filters, *J. Amer. Stat. Assoc. (B)*, 62:493–509, 2000;

15. Z. Yang and X. Wang, A Sequential Monte Carlo Blind Receiver for OFDM Systems in Frequency-Selective Fading Channels, *IEEE Trans. Sig. Proc.*, 50(2):271–280, Feb. 2002;

16. A.M. Tonello, On Turbo Equalization of Interleaved Space-Time Codes, *In Proc. 2001 Fall Vehi. Tech. Conf. (VTC-fall'01)*, Oct. 2001;

17. H. Dai and A.F. Molisch, Multiuser Detection for Interference-Limited MIMO Systems, In *Proc. 2001 Spring Vehi. Tech. Conf. (VTC-spring'01)*, May 2002;

18. M. Sellathurai and S. Haykin, TURBO-BLAST for Wireless Communications: Theory and Experiments, *IEEE Trans. Sig. Proc.*, 50(10):2538–2546, Oct. 2002;

19. X. Wang and H.V. Poor, Iterative (Turbo) Soft Interference Cancellation and Decoding for Coded CDMA, *IEEE Trans. Commun.*, 47(7):1046–1061, Jul. 1999;

20. L.R. Bahl, J. Cocke, F. Jelinek, and J. Raviv, Optimal Decoding of Linear Codes for Minimizing Symbol Error Rate, *IEEE Trans. Info. Theory*, 20(3):284–287, Mar. 1974;

21. T.L. Marzetta, BLAST Training: Estimating Channel Characteristics for High Capacity Space-Time Wireless, *In Proc. 37th Annual Allerton Conf. Commun., Compu., & Control*, Sep.1999;

22. Q. Sun, D.C. Cox, A. Lozano, and H.C. Huang, Training-Based Channel Estimation for Continuous Flat Fading BLAST, In *Proc. 2002 Int. Conf. Commun. (ICC'02)*, New York, N.Y., Apr. 2002;

23. A. Doucet, S.J. Godsill, and C. Andrieu, On sequential Monte Carlo sampling methods for Bayesian filtering, *Stat. & Comp.*, 10(3):197–208, 2000;

24. N.J. Gordon, D.J. Salmond, and A.F.M. Smith, Novel approach to nonlinear non-Gaussian Bayesian state estimation, *In 1993 IEE Proc., F. Radar Sonar and Navigations*, 140(2), Apr. 1993; and

25. G. Kitagawa, Monte Carlo Filter and Smoother for Non-Gaussian Nonlinear State Space Models, *J. Comput. Graph. Statist.*, 5(1):1–25, 1996.

Applicants are submitting copies of the above-cited references.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. §1.97(b), no statement or fee is required.

Respectfully submitted,

Ralph F. Hoppin

Ralph F. Hoppin
Registration No.: 38,494

Scully, Scott, Murphy & Presser
400 Garden City Plaza
Garden City, New York 11530
(516) 742-4343

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INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	Atty. Docket No. 02007 (16792)	Serial No. 10/631,991
	Applicant: Xiaodong Wang	
	Filing Date: July 31, 2003	Group: Unassigned

U.S. PATENT DOCUMENTS

EXAMINER's INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	1							
	2							
	3							

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

		G.J. Foschini and M.J. Gans, On Limits of Wireless Communications in a Fading Environment when Using Multiple Antennas, *Wireless Personal Commun.*, 6(3):311-335, 1998
		I.E. Telatar, Capacity of Multi-antenna Gaussian Channels, *Eur. Trans. Telecommun.*, 10(6):585-595, Nov. 1999
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